

Regional Sales of General Merchandise in Small Towns and Rural Areas

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AN INDEX of retail sales of general merchandise in small towns and rural areas for the country as a whole, together with a description of the method employed in its construction, was presented in the December 1934 issue of the *SURVEY OF CURRENT BUSINESS*. Since the publication of those figures, requisite basic data have been obtained making it possible to construct index figures for four main geographical regions of the country¹—the Middle West, the East, the South, and the Far West.

The regional indexes are constructed from dollar-sales figures furnished by the firms which cooperated in supplying the material from which the United States total rural sales index was computed, and the figures presented herewith are entirely comparable in method with that index. The cooperating firms are Chicago Mail Order Co., Montgomery Ward & Co., Sears, Roebuck & Co., and J. C. Penney Co.

It should be noted that while the figures obtained from the four firms furnish a fairly large sample of rural sales of general merchandise, the indexes are not entirely representative since the trend of sales of small independent rural stores differs somewhat from that of the large chain organizations and mail-order companies. Circumstances may require later expansion or modification of the indexes. The data will be supplemented by sales of independent rural stores when an adequate sample of such can be obtained. Also a comparison will be made with figures provided by the Census of Business, 1935, when those figures become available, and should any notable change in the representativeness of the sample be revealed, necessary adjustments will be made.

The J. C. Penney Co. furnished figures comparing sales in each month with sales in the corresponding month of the previous year for an identical group of stores, thus making it possible to eliminate the effect of expansion in the number of stores.² For the three mail-order firms sales made by mail only were used, the bulk of these sales go to persons in communities of less than 10,000 population. Sales of local stores maintained by two of the mail-order companies were excluded from the index, since they represented too

large a volume of urban trade. J. C. Penney Co. maintains a number of stores in places exceeding 10,000 population; however, sales of these stores were not excluded since a considerable portion of their business comes from the outlying country.

Relative Importance of Sales in Different Regions

The total sales of the four companies as used in the construction of the regional indexes aggregated about \$392,000,000 in 1933 and represent about one-fifth of all general merchandise sales in places of less than 30,000 population, as shown by the 1933 Census of American Business. Of this total, both the East and the South accounted for about \$71,000,000, or 18 percent each; the Middle West \$187,000,000, or nearly 48 percent; and the far West \$63,000,000 or 16 percent. Since no single figure is published by the census which would adequately represent sales in rural regions and small towns, an arbitrary figure was arrived at by combining the census figures representing sales of general merchandise stores in places of less than 30,000 population, catalog sales of all mail-order houses, and sales other than food in all country general stores, it being assumed that approximately one-half of the sales of such stores is food.

Methods of Computing Indexes

The index figures in the group are arithmetic averages of weighted relatives based on average daily sales. After converting the figures to an average daily sales basis, relatives representing sales in the different regions were computed for each firm using the average for the 12 months of 1931 as the base period. These relatives were then multiplied by the respective individual weights for the regions assigned each company. The aggregates thus obtained for the four companies were combined according to regions, and the final indexes computed, using the monthly average for 1929-31 as 100.

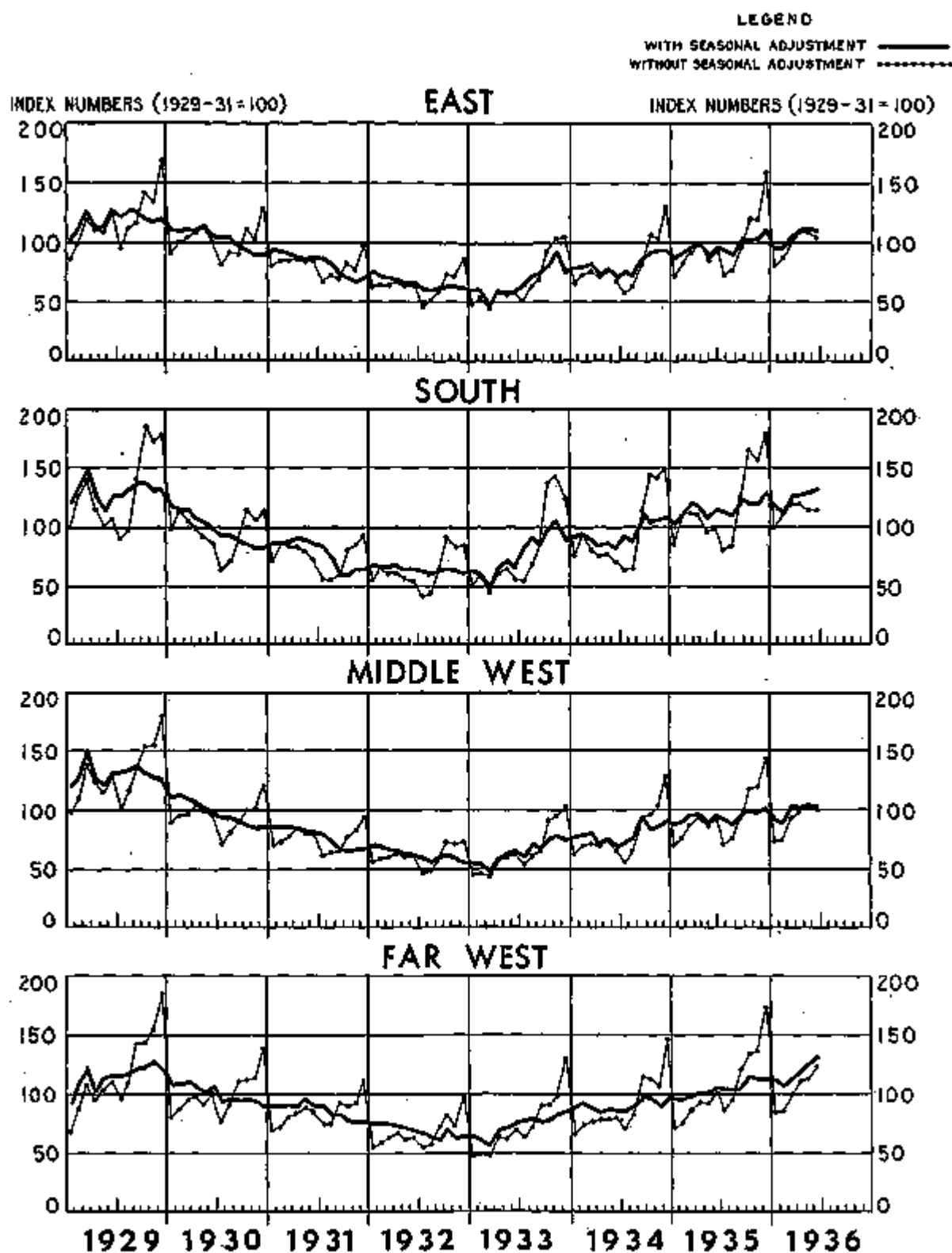
For convenience, the actual computation was made on the basis of a standard length month, equivalent to an average daily sales basis. To convert the monthly sales figures to a standard length month basis the

¹ Because of the nature of mail-order distribution, variations from the regional divisions used by the Bureau of the Census were necessary, the States being grouped as follows: *Middle West:* Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Montana, Wyoming, Colorado, New Mexico. *East:* Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia. *South:* North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Texas. *Far West:* Idaho, Arizona, Utah, Nevada, Washington, Oregon, California.

² These figures were converted to an average daily sales basis, from which year link relatives were computed; all of the link relatives thus obtained being to effect

a series of index numbers, but each having a different base. These link relatives extending over several years were then converted into an index with a common base. In order to do this, the year 1931 was employed and an ordinary index for that year was made by dividing each month's sales by the average for the 12-month period. Each of the index numbers for 1931 was multiplied by the relative for the corresponding month in 1932, to secure an index for each month of 1932, and they were divided by the relatives of 1931 to obtain index numbers for the corresponding months of 1932. The index numbers for 1930 in turn were divided by that year's relatives to extend the index back to 1929 and those for 1932 were multiplied by the relatives for 1932 to project it forward, and so on. The result of this process was an index based on the average monthly sales for 1931.

**Trend of Sales of General Merchandise in Small Towns and Rural Areas,
by Regions, 1929-36**



number of working days in each month was calculated back to January 1929; also the number of working days in a standard length month was computed, using a period of 28 years. The sales figures were adjusted to a standard length month basis by multiplying them by the ratio of the number of days in the standard length month to the number of days calculated for the particular month concerned. In calculating the number of working days in a month, allowance was made for the varying sales importance of the different days of the week. The weights assigned the respective days were not the same for all four companies since the proportion of weekly sales made on the different days varied somewhat.

The sales figures were weighted for each company and for each region, the weights varying accordingly. The selection was made with regard, primarily, to the proportion the different company's sales represented of the total sales of each region. Some slight changes were made to take into account for each organization such secondary factors as the general geographical distribution of sales, the proportion of nonrural customers, the variety of merchandise carried, and the relative importance and reliability of sales reported as an indicator of business in rural communities.

An index adjusted for seasonal variations was also computed for each geographical region. A study of the monthly sales figures showed that seasonal influences were not uniform for all regions and, in order to remove satisfactorily the seasonal swings from the index figures, a series of representative correction factors were computed for each region. The "ratio to moving average" method was employed in making the computations with certain further refinements to overcome the lack of data for earlier years. No adjustment was made for the shifting date of Easter; however, should sales figures for subsequent years show any relatively important change in its effect on rural sales, necessary adjustments will be made.

Trend of Sales in Recent Years

From 1929 through 1932 the trend of general merchandise sales in rural areas was steadily downward in all regions. Sales for 1932 were only about one-half as large as the 1929 totals, with decreases ranging from 42 percent in the far West to 52 percent in the Middle West. The largest relative decline for any one year was in 1930, when sales in both the Middle West and in the South fell off 26 percent. The East experienced its greatest decline the following year, and in the far West the largest drop was in 1932.

On a monthly basis, sales were at a peak in March of 1929 in all areas except the far west (after adjustment for seasonal variation). In the latter region, the peak reached in November was 3 percent higher than the top of the spring movement. All of the indexes were lowest

in March 1933, with the index for three of the regions varying only from 47.1 to 49.2; the index for the far western region was 55.4.

A definite upward swing in sales throughout the country took place during the second quarter of 1933 and has continued up to the present time. Recovery during the first year was decidedly more rapid and more pronounced in the South than in other parts of the country, sales having increased 24 percent from 1932 to 1933 as compared with gains ranging from 4 to 9 percent in the other three regions. A more general gain, however, took place the following year when the dollar volume of sales was about one-fifth greater in each region than for 1933. In 1935, a further gain of about one-fifth was recorded, with the regional increases remarkably uniform for the second consecutive year.

Rural sales continued to record substantial gains during the current year as farm income continued to expand. Total sales for the first half of the year for the country as a whole were about 11 percent in excess of the corresponding period of 1935. The increases, however, varied considerably in the different regions. The greatest relative increase for the 6-month period was recorded in the far West, which showed a gain of 18 percent, and the smallest was in the Middle West where sales increased about 8 percent.

The drought, which has assumed serious proportions this summer, has not as yet been reflected to any important extent in the indexes. The losses experienced may be expected to affect sales in some areas, but the marked rise in prices of the farm products affected will be an offsetting influence for the country as a whole.

A comparison with the 6-month period of 1929 shows that sales in the far West were 7 percent greater for the first half of 1936 than in 1929, the South was only slightly below the 1929 figure for that region, while the East still lacked 9 percent and the Middle West 24 percent of the 1929 6 months' totals.

Indexes Will Be Issued Monthly

The percentage change comparisons of sales by regions which have been shown regularly in monthly statements issued in mimeograph form by the Bureau, will be supplemented by the actual index figures for each region. This group of indexes will also appear with the series for the country as a whole which have been published each month on page 27 of this magazine.

Additional Data on Independent Store Sales

In order to supplement the indexes of the large merchandisers in rural areas, and the other retail sales indexes as well, the Bureau has inaugurated a series of reports of the sales of independent merchants, by States.

The splendid cooperation of retailers, and the collaboration of the bureaus of business research of several universities has enabled this service to expand from the

3 States originally covered to some 15 States at the present time.

The figures are released before the end of the month following that to which they relate, and show by lines of trade the changes in sales volumes for the month, as compared with those of the preceding month of the same year and also with sales of the corresponding month of the previous year. The number of firms reporting and the actual dollar figures are also shown; however, the method of presentation insures nondisclosure of reported figures of individual businesses.

Reports are available through the Bureau for the States of Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Massachusetts, Missouri, Nebraska, New Mexico, Ohio, Oklahoma, Texas, Wisconsin, Wyoming. It is planned to collect similar information from additional States and eventually to expand the coverage so that it will be national in scope. When data have been collected for a sufficient period, it is hoped that indexes of the sales movement may be constructed and the data presented in a manner which will facilitate ready comparison with other retail sales data.

Indexes of Dollar Sales of General Merchandise in Small Towns and Rural Areas by Regions

(1920=100)

Year and month	Without adjustment for seasonal variation				With adjustment for seasonal variation			
	Middle West	East	South	Far West	Middle West	East	South	Far West
1929								
January	88.1	88.6	89.7	88.4	110.7	101.8	120.1	91.0
February	109.3	90.4	120.4	86.6	120.4	103.7	120.6	109.0
March	127.0	118.0	139.3	107.5	122.2	124.2	148.7	122.2
April	120.0	110.0	116.1	98.7	124.8	111.1	124.5	104.6
May	115.2	108.3	109.7	103.7	118.7	111.1	118.7	116.2
June	120.4	123.8	108.6	110.7	120.0	120.0	120.2	117.1
July	101.4	94.9	87.5	90.3	120.1	120.0	120.1	110.1
August	115.0	111.0	99.2	105.0	122.2	125.5	130.0	118.5
September	105.0	117.1	139.2	140.3	120.3	125.2	134.0	120.3
October	104.1	141.1	133.5	142.3	120.0	119.0	132.7	121.0
November	105.2	124.0	171.0	153.0	122.5	117.0	139.2	127.5
December	177.8	169.8	177.5	123.2	125.3	110.2	120.6	120.1
Annual index	120.1	117.8	128.0	118.0				
1930								
January	89.1	91.4	95.0	89.0	108.7	108.8	118.6	107.4
February	96.2	100.7	118.0	86.7	111.3	110.1	112.0	103.6
March	97.1	103.0	107.0	96.9	107.0	110.6	116.1	109.6
April	104.0	107.4	96.6	98.3	106.5	108.2	100.8	103.3
May	99.0	111.8	81.4	91.1	102.1	114.7	103.0	101.2
June	94.6	102.6	85.2	100.9	97.2	105.1	90.1	100.8
July	72.1	81.9	89.7	77.1	92.5	103.0	91.7	92.9
August	81.8	92.0	70.7	88.5	92.0	102.0	93.0	96.2
September	88.0	90.4	90.3	100.8	90.4	90.8	88.1	94.7
October	100.4	110.7	114.9	112.1	94.8	92.4	93.0	95.8
November	102.0	102.5	107.1	114.5	92.9	89.9	90.5	95.0
December	120.1	127.7	112.4	127.5	94.0	89.0	92.2	90.2
Annual index	95.6	101.0	96.1	99.4				
1931								
January	89.6	78.9	71.3	88.0	88.2	89.0	80.5	91.3
February	72.5	82.0	94.4	71.4	82.8	91.7	84.0	90.3
March	78.0	84.0	80.9	70.5	85.5	98.0	87.6	90.8
April	82.8	86.0	82.3	82.9	84.1	88.4	89.0	89.5
May	78.9	82.0	77.9	87.1	81.3	85.0	87.0	86.7
June	78.5	84.4	72.5	83.8	80.0	84.5	84.3	88.7

Indexes of Dollar Sales of General Merchandise in Small Towns and Rural Areas by Regions—Continued

(1920=100)

Year and month	Without adjustment for seasonal variation				With adjustment for seasonal variation			
	Middle West	East	South	Far West	Middle West	East	South	Far West
1932								
January	81.7	87.5	87.1	73.1	70.1	86.0	82.1	88.0
February	84.2	71.6	59.0	74.3	73.3	80.9	73.7	80.9
March	85.0	82.3	80.8	82.4	83.3	73.0	56.4	79.8
April	77.4	81.7	80.0	80.7	85.3	63.0	58.2	76.7
May	82.4	77.2	84.0	82.1	87.0	67.4	63.0	77.3
June	84.5	87.9	90.1	112.3	80.8	68.7	66.3	73.6
Annual index	78.5	80.3	74.9	84.0				
1933								
January	88.8	82.9	86.1	86.2	80.3	74.9	67.0	74.0
February	85.5	84.7	85.6	87.7	87.6	70.7	60.9	73.0
March	89.4	83.0	80.4	84.3	80.0	67.0	64.0	73.5
April	81.0	80.7	81.5	80.8	81.0	67.1	68.4	72.2
May	80.4	83.1	86.7	82.8	82.3	64.7	82.7	69.5
June	80.8	84.5	83.1	83.0	82.3	64.2	64.0	68.7
July	48.7	40.8	42.4	41.1	58.5	48.7	51.0	60.4
August	49.6	52.0	48.1	40.9	50.8	58.8	50.1	61.7
September	88.6	57.7	65.0	71.0	60.1	61.7	63.4	60.7
October	73.4	73.6	90.5	90.3	61.9	62.1	85.8	68.6
November	71.2	72.0	85.2	71.5	57.9	62.0	62.6	61.0
December	77.0	88.4	84.2	83.3	54.0	68.6	61.0	64.4
Annual index	61.3	64.5	68.0	67.0				
1934								
January	44.9	49.4	51.3	47.7	54.7	58.5	61.8	64.8
February	47.5	54.3	52.5	48.8	54.0	58.4	60.1	61.9
March	42.4	44.7	45.7	48.6	47.1	47.5	46.3	55.4
April	57.6	57.8	61.0	62.6	58.5	70.7	60.4	67.7
May	64.2	58.7	65.1	62.0	63.1	67.2	72.2	68.9
June	63.0	59.7	57.3	60.0	65.8	58.2	66.7	73.8
July	63.0	50.8	55.4	62.8	69.1	64.8	79.7	75.7
August	62.2	63.0	68.2	70.9	71.1	71.2	88.2	77.0
September	60.6	67.9	65.7	67.8	60.0	72.6	82.9	74.2
October	58.5	62.5	138.5	86.7	75.8	78.1	90.1	76.8
November	64.4	104.5	142.5	65.7	77.8	91.2	107.2	81.9
December	103.0	105.1	124.0	120.0	72.5	73.7	89.9	81.6
Annual index	60.7	66.9	79.4	73.1				
1935								
January	62.2	65.4	74.8	65.8	77.1	77.0	91.4	88.3
February	67.8	71.6	82.6	73.1	78.4	82.4	92.6	92.6
March	70.8	75.3	81.3	76.1	78.0	83.0	87.4	87.0
April	67.0	70.1	72.5	76.7	68.9	70.8	81.8	82.0
May	73.8	74.8	70.7	77.4	70.1	70.7	86.1	80.0
June	65.5	67.4	60.1	78.6	67.3	69.1	86.7	84.1
July	50.0	67.5	84.4	60.8	71.3	73.2	92.0	80.1
August	60.5	65.2	88.4	81.0	70.8	71.4	87.4	89.0
September	64.3	70.7	114.5	115.1	64.7	84.3	111.8	96.3
October	67.3	106.1	145.0	112.5	62.1	88.8	106.4	96.2
November	104.6	103.0	143.9	107.1	69.0	90.7	105.0	95.8
December	128.2	120.0	148.7	147.4	90.3	91.1	107.8	94.7
Annual index	79.4	80.4	95.9	90.1				
1936								
January	70.2	71.0	84.5	71.1	85.0	84.4	101.0	96.4
February	78.2	81.2	105.5	75.3	88.1	89.6	108.0	96.3
March	83.9	80.1	111.3	85.6	95.0	94.9	110.7	97.9
April	84.3	87.7	109.4	92.8	95.6	88.2	112.2	100.4
May	85.6	84.3	85.0	91.0	92.3	80.5	100.8	101.2
June	91.9	82.0	99.3	100.9	94.0	85.2	115.0	100.8
July	71.4	71.8	78.3	80.3	91.0	91.4	112.7	101.0
August	73.5	77.5	83.4	84.5	83.0	87.3	100.8	102.7
September	94.2	87.1	126.1	131.4	94.7	103.9	122.0	103.7
October	117.1	110.7	163.7	134.4	98.8	104.0	120.8	114.0
November	119.7	110.3	187.4	135.1	97.3	104.2	118.4	112.1
December	143.7	158.0	178.3	172.9	101.2	111.3	120.2	112.4
Annual index	92.8	90.8	115.4	105.1				
1937								
January	73.4	78.9	93.8	82.0	80.6	93.9	128.2	111.3
February	75.3	84.7	111.4	88.0	87.0	94.7	111.4	105.8
March	92.8	100.7	118.4	100.1	105.1	107.2	127.4	124.4
April	99.2	108.2	117.0	110.7	100.7	200.7	127.2	219.0
May	102.3	107.0	113.0	112.8	105.4	110.7	127.0	123.4
June	100.1	105.1	114.0	122.7	102.6	107.8	134.8	129.6